

# PATENT ABSTRACTS OF JAPAN

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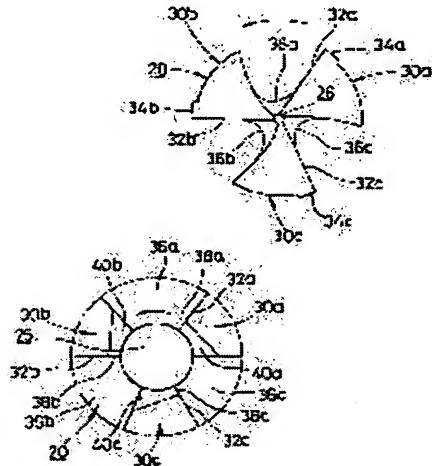
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## (54) DRILL



### (57) Abstract:

**PURPOSE:** To reduce cutting resistance of a drill and to enable its high speed feed to be performed, by providing a hole, which opens to an edge point central part of the drill penetrating through on the center line, and forming subedges, having flanks formed so as to spread the hole, to be placed inside plural cutting edges connecting with the hole.

**CONSTITUTION:** A drill 20, rotating in the direction of an arrow head in the drawing and feeding cutting fluid from a hole part 26, cuts a workpiece by cutting edges 32aWc, having flanks 30aWc, and subedges 38aWc, having flanks 40aWc, and a hole in a diameter, formed by lands 34aWc, is drilled. Here the location, corresponding to an edge point central part, crushes cutting chips to be removed by the subedges 38aWc and a generated built-up edge, and the drill transfers the cutting chips along clearance grooves 36aWc to be discharged. And the drill, when it is in a process of penetration or returning, discharges the cutting chips, generated in a part surrounded by the built-up edge, in accordance with its falling off. Accordingly, the edge point central part provides small resistance against a feed of the drill, and the drill, substantially reducing its cutting resistance, is enabled to be fed in a high speed.

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## LEGAL STATUS

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